

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 11 and 13-36 are pending in the application. Claims 11 and 31 have been amended to recite that the hole of the counterdie has a shape and dimension that corresponds to a shape and dimension of the guide pin such that the bar material is prevented from flowing between the guide pin and hole in the counterdie during the application of pressing force to the mandrel. Basis for this amendment can be found in the originally filed specification including at page 7, line 29 through page 8, line 11, and Figs. 3A through 3D. In Figs. 3A-3D, no bar material A1 and A2 is allowed to flow between the guide pin 18 and the hole 19, as shown by the lack of a nipple on the cup 14 in Fig. 3D. Claims 11 and 31 have also been amended to incorporate the subject matter of dependent claim 12. Claims 11 and 31 have been amended to recite active method steps and delete preferred embodiments. The preferred embodiments deleted are now recited in new claims 33-36. Basis for new claim 33 can be found at claim 11. Basis for new claims 34-36 can be found at claim 31. No new matter has been added.

The rejection of claims 11, 12 and 16 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,042,283 (Nishida) is respectfully traversed. The claimed invention is not anticipated by Nishida for the following reasons.

Claim 11 recites that "the hole of the counterdie has a shape and dimension that corresponds to a shape and dimension of the guide pin such that the bar material is prevented from flowing between the guide pin and the hole in the counterdie during the application of pressing force to the mandrel." Thus, in the presently claimed invention, no nipple is formed in the cup. See Fig. 3D of the present application. The nipple is not formed because as shown in present Figs. 3A-3D, no bar material A1 and A2 is allowed to flow between the guide pin 18 and the hole 19.

In contrast, as shown in Fig. 2 of Nishida, a nipple is clearly formed between the protruding pin of the mandrel 5 and the conical hole in the bottom of the die. The "pin" of Nishida does not function as a guide, but rather as a die to form the nipple.

In the claimed invention, no nipple is formed between the guide pin and the counterdie. The claimed guide pin thus functions only as a guide and not as a die to form a nipple.

In regards to claim 16, the body which is to be cold flow pressed is made by a bar material which has obtained a homogenous microstructure in the axial direction of the bar due to the forming of the bar, which results in several advantages throughout the whole manufacturing process. See bridging pages 2 and 3 and page 9, second paragraph of the present specification. Nishida does not address this problem, nor does it suggest using a bar material with a homogenous microstructure coaxial with the central axis of the body that coincides with the direction of movement of the mandrel.

In view of these differences between the claimed invention and Nishida, withdrawal of the Section 102 rejection is respectfully requested.

The rejection of claims 13-15 and 17-30 under 35 U.S.C. § 103(a) as being unpatentable over Nishida in view of U.S. Patent No. 4,321,816 (Nakahara '816) is respectfully traversed. The claimed invention is not taught or suggested by the theoretical combination of Nishida and Nakahara '816 for the following reasons.

Nishida teaches to form a nipple between the pin and the die, as discussed above and shown in Fig. 2 of Nishida. Nakahara '816 also teaches to form a nipple between the pin 26a and the die 5, as shown in Fig. 7. Figs. 9 and 10 of Nakahara '816 clearly show that the nipple formed between the pin 26a and the die 5 is threaded. Thus, the "pin" in the combination Nishida and Nakahara '816 acts as die for forming a nipple, and not as a guide.

In contrast, as discussed above, no nipple is formed between the guide pin and the counterdie in the claimed invention. The claimed guide pin thus functions only as a guide and not as a die to form a nipple. See the cup formed in Fig. 3D of the present invention.

In the present invention, the body will be centered in the counterdie by the guide pin, which will result in a symmetrical distribution of the material in the die. This results in several advantages, which are mentioned on pages 3-4 and 12-14 in the present description.

The exact positioning of the body and the mandrel in relation to the die cannot be secured by any of the methods and apparatuses in the combination of cited references, because the pins disclosed therein act as dies, not guide pins. The problems which are mentioned on pages 1-2 of the present application apply to the cited references.

In view of the differences between the claimed invention and the combination of cited references, and the unexpected advantages of the claimed invention, withdrawal of the Section 103 rejection is respectfully requested.

The rejection of claims 31 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Nishida in view of U.S. Patent No. 4,200,051 (Nakahara '051) is respectfully traversed. The claimed invention is not taught or suggested by the theoretical combination of Nishida and Nakahara '051 for the following reasons.

Nishida teaches to form a nipple between the pin and the die, as discussed above and shown in Fig. 2 of Nishida. Nakahara '051 also teaches to form a nipple between the pin and the die 12, as shown in Fig. 2. Figs. 1a and 1b show clearly show that the nipple 4 formed between the pin and the die 12 is threaded. Thus, the "pin" in the combination of Nishida and Nakahara '051 act as die for forming a nipple, and not as a guide.

In contrast, as discussed above, no nipple is formed between the guide pin and the counterdie in the claimed invention. The claimed guide pin thus functions only as a guide and not as a die to form a nipple. See the cup formed in Fig. 3D of the present invention.

In the present invention, the body will be centered in the counterdie by the guide pin, which will result in a symmetrical distribution of the material in the die. This results in several advantages, which are mentioned on pages 3-4 and 12-14 in the present description.

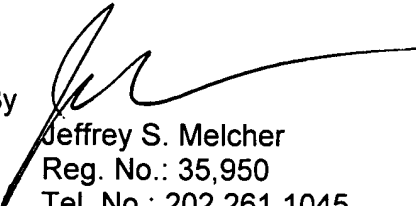
The exact positioning of the body and the mandrel in relation to the die

cannot be secured by any of the methods and apparatuses in the combination of cited references, because the pins disclosed therein act as dies, not guide pins. The problems which are mentioned on pages 1-2 of the present application apply to the cited references.

In view of the differences between the claimed invention and the combination of cited references, and the unexpected advantages of the claimed invention, withdrawal of the Section 103 rejection is respectfully requested.

In view of all of the rejections of record having been addressed, Applicants submit that the present application is in condition for allowance and Notice to that effect is respectfully requested.

Respectfully submitted,
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